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of

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Application Number

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Filing Date

February 26, 2004

First Named Inventor:

Hossein Sedarat

Art Unit

2631

Examiner Name

Not Yet Assigned

Attorney Docket Number

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			Application Number	10/789,552	
			Filing Date	February 26, 2004	
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			Art Unit	2631	
			Examiner Name	Not Yet Assigned	
Sheet	2	of	4	Attorney Docket Number	006491.P059
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/LN/		FRANKLIN, CURT, "How DSL Works," How Stuff Works, http://computer.howstuffworks.com/dsl.htm/printable , printed November 16, 2004.			
		SEDARAT, HOSSEIN, et al., "Impulse Noise Protection for Multi-Carrier Communication Systems", Submitted to IEEE ICASSP (2005).			
		SEDARAT, HOSSEIN, et al., "Multicarrier Bit-Loading in Presence of Biased Gaussian Noise Sources", IEEE Consumer Communication and Networking Conference, January 2005.			
		BACCARELLI, ENZO, et al., "Novel Efficient Bit-Loading Algorithms for Peak-Energy-Limited ADSL-Type Multicarrier Systems, IEEE Trans on Signal Processing, vol. 50, no. 5, May 2002.			
		SONALKAR, RANJAN, et al., "An Efficient Bit-Loading Algorithm for DMT Application," IEEE Comm. Letters, vol. 4, pp. 80-82, March 2000.			
		CAMPELLO, JORGE, "Optimal Discrete Bit Loading for Multicarrier Modulation Systems," IEEE International Symposium on Information Theory, August 1998, Cambridge, MA.			
		CHOW, PETER S., et al., "A Practical Discrete Multitone Transceiver Loading Algorithm for Data Transmission over Spectrally Shaped Channels," IEEE Trans. on Communications, vol. 43, no. 2, 1995.			
		FISCHER, ROBERT F.H., et al., "A New Loading Algorithm for Discrete Multitone Transmission," IEEE, 1996, pp. 724-728.			
		LAMPE, LUTZ H.-J., et al., "Performance Evaluation of Non-Coherent Transmission over Power Lines," 8 pgs.			
/LN/		HENKEL, WERNER, et al., "Maximizing the Channel Capacity of Multicarrier Transmission by Suitable Adaptation of the Time-Domain Equalizer," IEEE, Vol. 48, no. 12, December 2000.			
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/LN/		LASHKARIAN, NAVID, et al., "Fast Algorithm for Finite-Length MMSE Equalizers with Application to Discrete Multitone Systems," IEEE 1999, pp. 2753-2756.			
		MELSA, PETER J.W., et al., "Impulse Response Shortening for Discrete Multitone Transceivers," IEEE Vol. 44, no. 12, December 1996, pp. 1662-1672.			
		AL-DHAHIR, NAOFAL, et al., "Optimum Finite-Length Equalization for Multicarrier Transceivers," IEEE Vol. 44, No. 1, January 1996, pp. 56-64.			
		LEKE, ACHANKENG, et al., "A Maximum Rate Loading Algorithm for Discrete Multitone Modulation Systems," IEEE 1997, pp. 1514-1518.			
		BINGHAM, JOHN A.C., "Multicarrier Modulation for Data Transmission: An Idea Whose Time Has Come," IEEE, May 1990, pp. 5-14.			
		ARSLAN, G., et al., "Equalization for Discrete Multitone Transceivers to Maximize Bit Rate," IEEE, Vol. 49, No. 12, December 2001, pp. 3123-3135.			
		FARHANG-BOROUJENY, BEHROUZ, et al., "Design Methods for Time-Domain Equalizers in DMT Transceivers," IEEE, Vol. 49, No. 3, March 2001, pp. 554-562.			
		WYGLINSKI, ALEXANDER M., et al., "An Efficient Bit Allocation for Multicarrier Modulation," IEEE Wireless Communication, Networking Conference, Atlanta, GA, March 2004, 4 pgs.			
		"Draft Standard," Network and Customer Installation Interfaces- Asymmetric Digital Subscriber Line (ADSL) Metallic Interface, Draft American National Standard for Telecommunications, Alliance for Telecommunications Industry Solutions, T1.413-1998.			
		KRONGOLD, BRIAN S., et al., "Computationally Efficient Optimal Power Allocation Algorithms for Multicarrier Communication Systems," IEEE Trans. on Communications, vol. 48, pp. 23-27, Jan. 2000.			
↓ /LN/		BARRETO, ANDRE NOLL, et al., "Adaptive Bit Loading for Wireless OFDM Systems," IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, October 2001.			

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/LN/		MILOSEVIC et al., "Simultaneous Multichannel Time Domain Equalizer Design Based on the Maximum Composite Shortening SNR". Dept. of Electrical and Computer Eng., The University of Texas, Austin Texas, Prior to filing date of current application, pp. 5 total.			
↓		ANA GARCIA ARMADA et al., "Multi-User Constant-Energy Bit Loading for M-PSK-Modulated Orthogonal Frequency Division Multiplexing", © 2002 IEEE, pp. 526-530.			
↓		MISAO FUKUDA et al., "A Line Terminating LSI Using Echo Cancelling Method for ISDN Subscriber Loop Transmission". IEEE Journal on Selected Areas in Communications, Vol. 6, No. 3, April 1988, pp. 476-483.			
↓		CHENG-SHING WU et al., "A Novel Cost-Effective Multi-Path Adaptive Interpolated FIR (IFIR)-Based Echo Canceller", © 2000 IEEE, pp. V-453-V-456.			
↓		Ranjan V. Sonalkar et al., "Shannon Capacity of Frequency-Overlapped Digital Subscriber Loop Channels", © 2002 IEEE, pp. 1741-1745.			
↓		IVAN A. PEREZ-ALVAREZ et al., "A Differential Error Reference Adaptive Echo Canceller for Multilevel PAM Line Codes" *Work supported by National Project T1C95-0026, © 1996, IEEE, pp. 1707-1710.			
/LN/		NADEEM AHMED et al., "Optimal Transmit Spectra for Communication in the Presence of Crosstalk and Imperfect Echo Cancellation", Copyright 2001 IEEE, pp. 17-21.			

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